

## Urban Structure and Morphology

---

Morphological studies often deal with development of forms and pattern of the present city or other urban areas through time, in short with evolution (Murphy, 1966). In fact, an urban settlement is apparently a physical entity and the morphology it acquires is a result of a long process of growth. In a more restricted sense, the terms of morphology refers to the internal structure of various land uses in urban areas. The functional structure, functions and forms, constitute principal and intimately related aspects of urban morphology. In a specific period of time, the structure of a town passes through various developmental stages and is the consequence of the processes it undergoes. In general, the morphology of a town is quite different from that of a biological organism, to the extent of its individuality with the function. But, the process of formation of a town and the development of an organic form are almost alike and pass through three stages: (i) Histogenesis, (ii) Patternogenesis, and (iii) Morphogenesis (Wolpert, 1967).

In the process of town formation 'histogenesis' refers to the origin of historical nucleus of the town, and it forms some definite means of intercommunication between individual human agglomerations. During this stage, the nucleus development of a town takes place. Settlement starts concentrating around a religious site, fort, lake, etc. centripetal force is active in this process. The pattern formation or 'patternogenesis' may be regarded to be the phase of development of various nuclei of human settlements and their interactions within, ultimately providing a pattern of skeleton to the town. More precisely, the development of roads and structures can be put into this heading. Thus, the sectoral development of town takes place and centrifugal force, to some extent, is active. The state of 'morphogenesis' can be perceived in the morphological character, to be closely associated with the functional character of present day city (Singh and Bansal, 2005). In the light of the above processes and

forces, the growth characteristics of urban centres of 'Kumaun Lake Region' have been examined.

## 5.1 Morphology in General

Urban morphology is the study of the physical form of a city, which consists of street patterns, building sizes and shapes, architecture, population density and patterns of residential, commercial, industrial and other uses, among other things. Special attention is given to how the physical form of a city changes over time and to how different cities compare with each other. Another significant part of this subfield deals with the study of the social forms which are expressed in the physical layout of a city and conversely, how physical form produces or reproduces various social forms. This approach challenges the common perception of unplanned environments as chaotic or vaguely organic through understanding the structures and processes embedded in urbanization.

In American geography, urban morphology as a particular field of study owes its origins to Lewis Mumford, James Vance and Sam Bass Warner. Peter Hall of the UK is also a central figure in the field of urban morphology. In Europe the word morphology has been used in various times by Dickinson, Smailes, etc. Dickinson (1950) wed and interpreted in terms of its origin, growth and defined it thus, "morphology is concerned with plan and build of habitat". Morphology of towns thus reflects its functions and idea of planning and building at each phase of its development. Ratzel has remarked that, "like functions beget like forms", and in identical frame of references "the nature of both depends on the cultural realm in which they develop" (Dickinson, 1964).

Morphology studies often deal with development of forms and pattern of the present city or other urban areas through time, in short with evolution (Murphy, 1966). The influences which the city exerts on the social and economic structure of the area help in the economic structure of the area and in the formation of land use patterns. The

different functional characters are found to be concentrated at different places. The priority is for the economic and social utility of the particular function (Singh, 1964). According to Dickinson (1956) the uses which can pay the highest rent at a particular place occupies the land once the site is occupied, it is the human or cultural factors which give the essential form, shape and sustenance to the town on a particular site according to the needs of the age (Smailes, 1966).

J.E. Brush (1962) has discussed the morphology of Indian cities with respect to existing layout of streets, the arrangement and characteristics of buildings and associated patterns of land use. Discussing about the above views, R.L. Singh (1961) pointed out that the same should be pursued not only with a view to identify new categories and pattern or developing new classification but also for the light they throw on historical sequence and functional relationship. According to Singh (1970), the term 'morphology' includes the various internal forms and structural patterns and characteristics of a spatial unit. In brief, urban morphology is the distribution of different functions in a city.

According to Dickinson (1956), it is concerned with the plan and builds of the habitat, viewed and interpreted in terms of its origin, growth and function. It is a description of their nature, their relative disposition and their social interdependence that constitutes a geographical analysis of an urban area (Smailes, 1970). There are three basic models in urban morphology discussed in previous chapter:

1. Burgess Concentric Model (1929),
2. Hoyts Sector Model (1939),
3. The Multi Nuclei Theory (Ullmann & Harris, 1945)

However, no Indian town purely follows these urban morphological models. The most salient feature of urban morphology of Indian towns includes at least four types of cities, as defined by J.E. Brush (1968, 1973). Though a lot of variations in the city structure are observed - ranging from fully planned and modern westernized

cities to more or less indigenous cities, but a varying blend of the orient with the occident and with the distinctive Indianness is a common feature. The Indian culture still has an upper hand in most of the cities. The four types of the cities are:

- i. **Indigenous cities with one dominant node:** These cities, following in general the Bleicher-Clark Model of urban density gradient, are in majority numerically.
- ii. **Anglicized port cities:** (Mumbai, Kolkata and Chennai). These have lower densities in the city centre, as contrasted with the indigenous cities.
- iii. **Two-node cities:** this group includes cities like Hyderabad – Secunderabad and Bangalore.
- iv. **Planned cities:** Cities like Chandigarh, Jamshedpur and Bhubaneswar are include in this category, where the population density is lower throughout and the density crest is not necessarily in the centre.

The towns of the lake region are more or less follows the characteristics of the indigenous type. The morphological set-up of functions varies because it is the outcome of human creative instincts projected through the total setting of resources and cultures within the limits of time and space (Taneja, 1971). A second illuminating approach to Indian urban areas is through analysis of various parts of the complex, i.e. old (indigenous), Anglicised and newly developed planned areas. Indigenous and anglicized are two types of developments and in almost every resort they show a great contrast between indigenous part and Anglicised part. Typical Indian centres contain a congested old section, adjacent to which may be found carefully planned and often spacious sections dating back to British period. This character is very much traceable in Nainital and Bhimtal towns with one dominant node. The study of morphology of towns of the lake region, thus, shows either conflict, or blending of indigenous features and the hybridized European features. Now-a-days, towns

tend to assimilate the blending character more than conflict. Towns, entirely developed or influenced by the British, pertain to totally different type of morphology from prior developed towns of ancient and medieval.

The development of the various functions of a town depends upon its road pattern, because functional areas are not classified by only functions but also by the facilities available to go there. With the development of the town the functional areas also develop and change. They have a changing nature and by this they build the morphology of the town. The towns are very complicated in functions. Due to this, economic development does progress in functional areas. An urban settlement cannot be treated as an isolated physical or social unit because it is the focal point of activities for a much larger area the size and extent of which vary for each function. In this respect, only Nainital, Bhimtal and Bhowali towns are urban centres in true sense, whereas rest of the lakes of the study area are too isolated to consider as urban centres.

## **5.2 Morphology of Nainital**

An urban settlement is a physical entity and the morphology it acquires is a result of a long process of growth. The peculiarity of Nainital and its morphological complex is that the resort has neither any distinct and specific development land use pattern, nor the area has any major morphological zone. The functional classification of this sort of town is somewhat difficult. Nainital has developed into a tourist service zone. The segregation of function of functional zone of the town even does not follow any definite pattern, but it is clear that all the functions are concentrated around the lake. In fact the morphology of the town is very much affected with the presence of the lake. Nainital town has grown along two peculiar clusters of population, i.e., Tallital and Mallital on account of topographical features. Both the areas are self sufficient in respect of various types of urban functions and their growth has essentially been to serve a

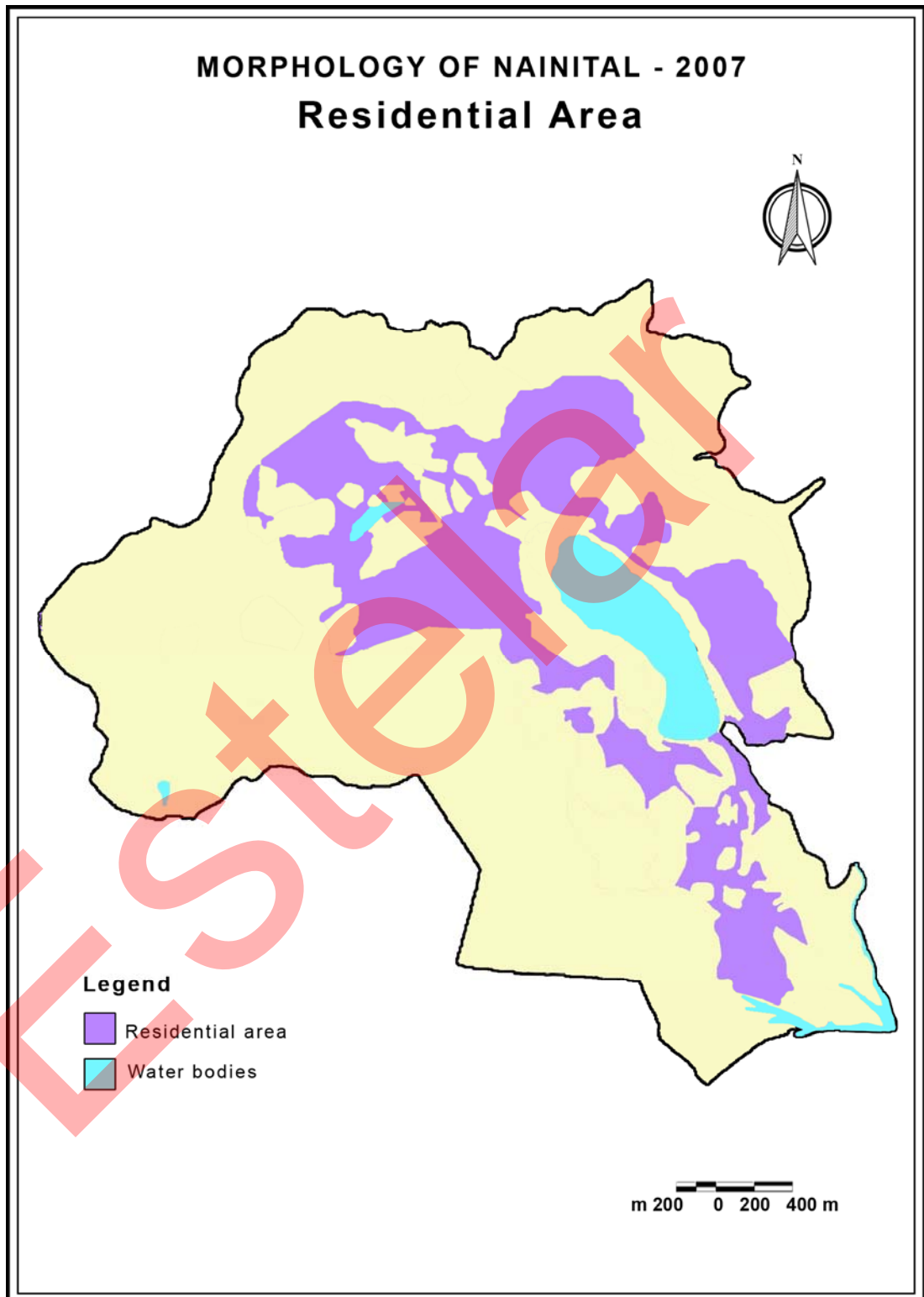
definite market. They have developed due to certain sets of reasons peculiar to each area and are situated roughly 1 km apart. Nainital is a famous tourist centre, well-known educational and administrative centre. Like most of the towns, Nainital too can be divided into the following generalized functional zones or rather areas, though the zoning tendency is not complete or absolute - commercial area, residential area, administrative area, educational area, recreational and the religious area.

### **5.2.1 Residential Area**

Most of the area of the town is occupied by residential areas. This area is affected not only by the physical conditions but also by social factors. Generally the rich people want to live in the outer and in peaceful places, but the common man wants to live nearer to their working place. Nainital is a tourist centre and this has affected its function. Therefore, this town has a large number of residential areas. The main residential areas lie in the north-west and south-east of the lake (Fig. 5.1). Residential areas of Nainital may be divided into two groups

#### **5.2.1.1 Residential Civil Area**

The civil residential area of the town has appeared over the hills around the lake. On the hillside some of the most spacious and comfortable bungalows of the modern type as also some precluded houses are located. Many of them are at present owned by rich and wealthy Indian people.

**Fig. 5.1**

The most popular and dense residential area of the town is the upper end of the lake towards the direction of Naina Peak. The topography has afforded several ideal sites for construction purpose



by way of level or near level land or slopes. Since the earliest times of the settlement of the town to present it has been the most favoured area as is evident by the existence of such important functions located as administrative, educational public utility services etc. High Court, Forest office, A.T.I., Polytechnic, Nainital Club, Kumaun University Office and its residential complex, Intermediate colleges and the most important function of a tourist town, viz., standard hotels Manu Maharani, Arif Castles, Shervani Hill Top Inn, Royal Hotel, Metropole hotel and Swiss hotel are located within this area. Because of these functions and facility of transport, new hotels have develop along the road that leads from Mallital Bazaar to A.T.I., other residential area and the settlements are distributed according to site conditions and transport facility.

A largest cluster along the intermediate zone of Ayarpatta Hill is that of the D.S.B. Campus of Kumaun University a few scattered settlements nearby, while towards the north-west N.C.C. Office and its surrounding area can be found a large clusters and some precluded settlement. The other cluster that has developed is above the Naina Devi temple.

In the higher zone next to the Tallital Market area, the area is mainly residential with clusters of settlement at many places. Residential areas also occur at specific sites, sometimes in a highly clustered manner i.e. the Long View area and adjacent slopes. Private accommodation in this area is very much in demand due to proximity of public schools and adequate transport facilities.

Between the roads leading from market to the Collectorate and the one leading to the Dharamshala and ultimately joining the Nainital-Kathgodam road there is a heavy concentration of houses. Through it is not so congested a locality as the market but the rate of its growth is very rapid.

There is another residential area road the Toll barrier on the Kathgodam road extending for about 800 metres. This cluster consists of the mohallas (localities) of Sipaidhara, Krishnapur and Rais Hotel



area. The concentration of population is heavy at certain places but in general it is not a congested locality.

Another residential area that has grown considerably is along the road from Tallital to Ramsay Hospital and adjacent areas. This is a newly developed area. The site is most preferred by seasonal tourist on account of its situation in respect of the lake view and the proximity to the market and the bus station.

The most popular residential area particularly from the tourist point of view has grown along Mall road right from Tallital to Mallital. There are at present hotels of near this road. The building are generally three to four storied and of modern types. The extension of residential area in this part has taken place to the maximum extent possible.

#### **5.2.1.2 Residential-cum-Business Area**

The majority of the native people of Nainital live in Bazaar, where most of the houses are their own. In both the area of Mallital and Tallital all the Bazaar lanes are partly residential and partly commercial. There the upper flats are usually for residence, while the shops are in the ground floor.

Tallital is supposed to be the oldest localities of the town. Tallital has an added advantage of its proximity to the bus station and in a hilly area where easy and cheap conveyance is not available. Tallital market and the adjacent area is one of the heavily congested localities of the town. Most of the houses in this area are three or four story. They are so close to each other that in most of the rooms the sun's rays can hardly penetrate.

The similar type of residential area has grown in Mallital Market and its peripheries. In general living conditions in the houses over the Pant Marg are much better and quite different as compared with the houses of the Bazaar lanes.

A large number of buildings are occupied by the hotel and restaurants, which are very well kept and properly managed.

## 5.2.2 Commercial Area

Joined by the famous Mall Road along the northern and southern eastern ends of the lake, the Mallital and Tallital are the two important business centres, serving the two main clusters of population of the town (Fig. 5.2). Nainital is a tourist centre with a large number of tourists visiting the town throughout the year. Thus, according to the needs of tourists, Nainital has developed commercial activities at a good scale and there are four main commercial areas in the town located in different parts and dealing with a variety of products:

### 5.2.2.1 Mallital Market

Situated at the upper end of the lake, the market of Mallital has a number of modern shops capable of fulfilling the requirements of the local people as well as the tourists. The market provides almost all types of products and services, i.e. essential goods, provisions, clothing, medicines, books, jewellery, tailoring, etc. While the main market has almost every type of shops, the vegetable and meat shops are housed in a separate area of the market. There is a smaller market towards the upper end of the main market which towards the High Court, which has a somewhat limited variety of products.

### 5.2.2.2 Tallital Market

Tallital market, developed near Bus Station, is a comparatively smaller business centre. The Tallital bazaar is supposed to be the oldest bazaar with one of the most crowded streets of the town. In view of its various services it is a more or less a multifunctional market.

### 5.2.2.3 The Tibetan Market

A special market has been developed for the Tibetan refugees in the flats near Nanda Devi Temple. This market has all sorts of goods required by tourists.

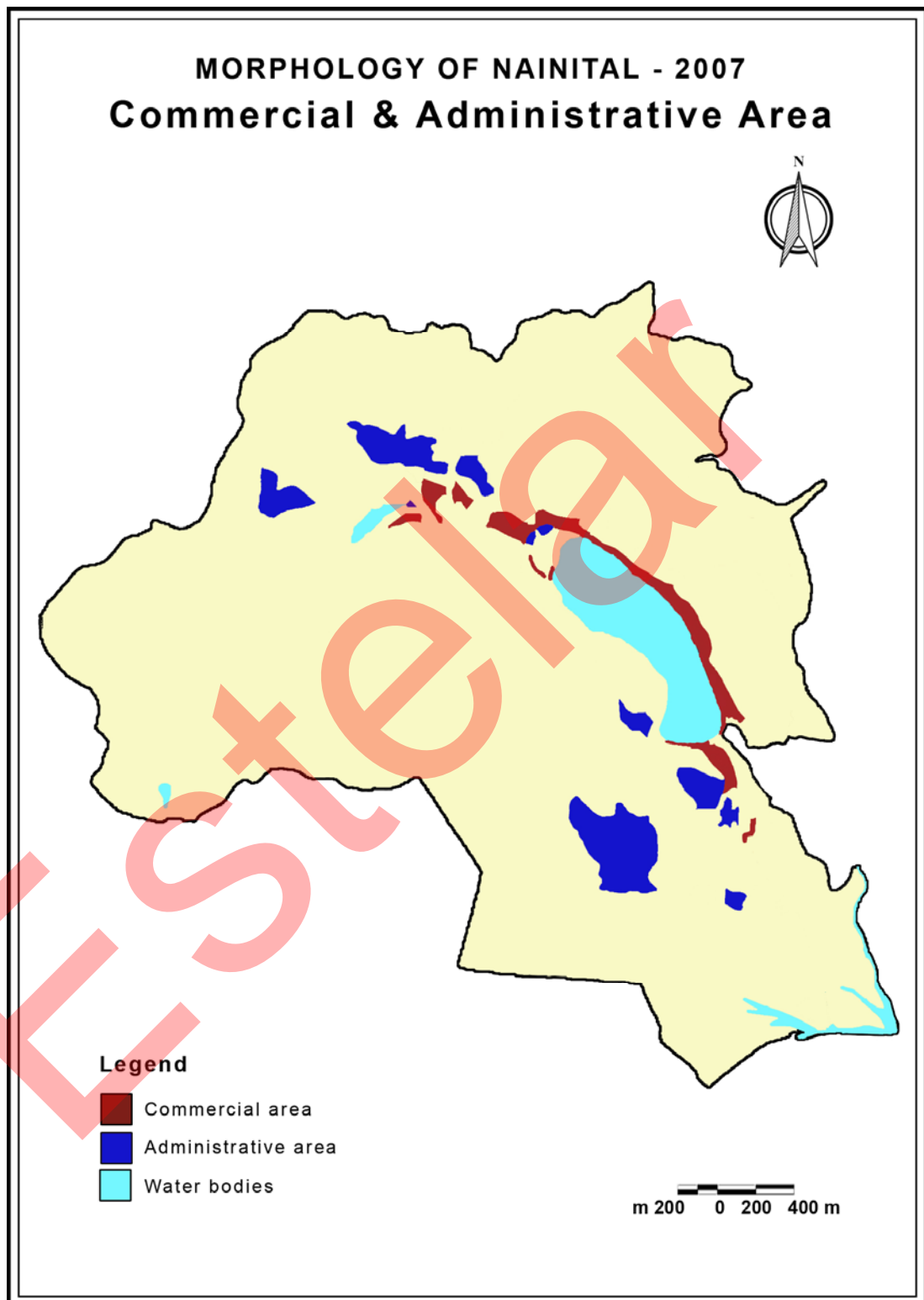
#### 5.2.2.4 Mall Road

Stretching from one end to other of the lake the Mall Road, provides an attractive shopping locality and here most of the shops are modern and sell branded items. The most remarkable feature of the Mall Road is that the shops over there are not in a monotonous continuation, but intercepted by hotels, restaurants, travel agencies, church, bank, club, etc.

Besides these, commercial areas have also emerged at some other sites of the town to meet the demands of specific areas particularly Naya Bazaar on Haldwani road, Cantonment Market on Bhowali road, Ramsay road, near Nainital Club, near Balika Mandir A.T.I. and Sukhatal road. In fact, development of such commercial areas reflects the needs of those specific parts of the town but these have developed only in a small scale and in limited extent.

### 5.2.3 Administrative Areas

Nainital, since its evolution, has been enjoying great administrative importance. Administration has been one of the oldest functions of the town and perhaps the ultimate purpose for founding and establishing the hill town was to shift a major proportion of the administrative functions to the town during the sweltering heat of summer and monsoon months in the plains. During the British period it had been the summer capital of the United Provinces. It had also been for several years military headquarters for the Eastern Command and the summer head-quarters of the North-Western Provinces. The shifting of the State Capital during summers brought about a number of changes in the morphology of landscape mainly in order to cater to the needs that arise. These mainly included provision of a variety of accommodation for official use or residential complexes for officers or VIPs, many of which are still serving more or less the same purpose. As the administrative offices are scattered, it is very difficult to demarcate this zone clearly (Fig. 5.2). However there are two prominent administrative zones in the town:

**Fig. 5.2****5.2.3.1 The High Court Area**

This area had a great administrative importance during the British regime. All offices of secretariat of U.P. Government used to shift here from Lucknow for six months during summers. But at

present the secretariat building has been converted into High Court and all offices have been shifted to Bhimtal. Some important offices are still located around the High Court in Mallital, the important ones being of those of the Conservator of Forests, Kumaun Circle, etc.

### 5.2.3.2 The Collectorate Area

Situated on easy reach and lying on Ayarpatta hill at the Tallital side, the Collectorate area is now considered as the most important administrative zone of the resort. Within a radius of 300 metres almost all the important courts and administrative offices are located here; some of the important offices are Commissioner of Kumaun, the District Magistrate office, office of the Superintendent of Police, Executive Engineers and Manager of Roadways office, the Treasury office, the Reserve Police Lines, the Foreigner's Registration office, Irrigation office, Lake Development Authority office, the Disaster Management office and various offices of Forest Department etc.

The growth of the town and limited space and accommodation available near the collectorate has resulted into establishment of offices at a number of places scattered throughout the town. A few offices are located along the Mall Road, the most important ones laying those of the Regional transport office, Tourist department and Industries office. Apart from these, there are a few other offices also such as the Post Office, the Telegraph Office and Telephone Exchange both are still located in Mallital and the Head Post Office at Tallital. Due to greater demand for postal and telegraphic services in the locality sub-post offices have been set up at Mall Road and the University.

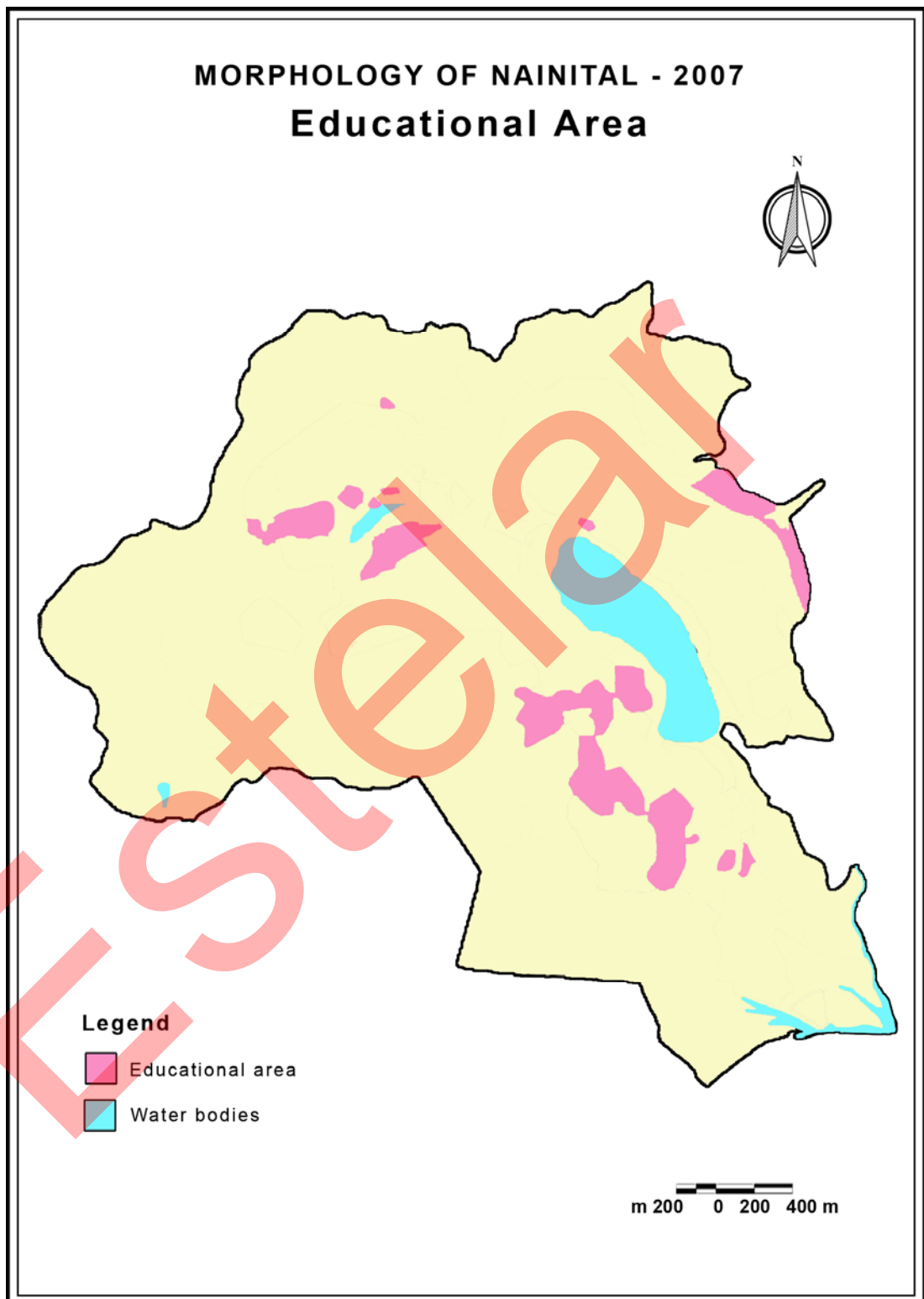
The Municipal Office which deals with the local administration is housed at a huge building at Mallital near the Flats. The building is of a recent construction as compared to other offices building and accommodates all the offices associated with the municipal administration.

The non-availability of accommodation at convenient places, particularly from the point of view of public and administrative convenience is mainly due to the hotel industry of the town. Most of the buildings at suitable places along the Mall Road and the markets are occupied by hotels, and hence there is a great shortage of accommodation for other purpose. Moreover, due to the topographical conditions of the town, the constructions of new buildings have restricted. Therefore, many offices have been shifted to Bhimtal.

#### 5.2.4 Educational Areas

Nainital is well known for its European pattern schools and colleges, which have been there since the arrival of Europeans.

It may be noted that in contrast to primary and middle schools, most of the higher educational institutions are situated in upper zone, where large and open spaces and playgrounds are available to them. All institutions are not closely situated. It is only Ayarpatta and Raj Bhawan area which covers a large compact area of all English medium schools, viz., Long View Public School, St. Mary's Convent, St. Joseph's College, All Saints College, Amtul Public School, Sherwood College, and St. Xavier's School. The D.S.B. Campus and Kumaun University are also included in this zone. In the Sukha Tal area, Balika Vidya Mandir, Bal Vidya Mandir, Ashdale School, St. John's School and Sainik School form a separate small zone. C.R.S.T. Inter College and Sanwal School are separately located at Mallital near the upper end of the lake. Similarly in Tallital, Bishop Shaw School and a little above the toll barrier on the Kathgodam Nainital road the Govt. Girls Inter College and Govt. Inter College is located. In Sher-ka-danda area the Birla Vidya Mandir is located.

**Fig. 5.3**

The general tendency of the institutions imparting education to kindergarten, primary and secondary students is to occupy a place close to the densely populated parts of the city. There are number of



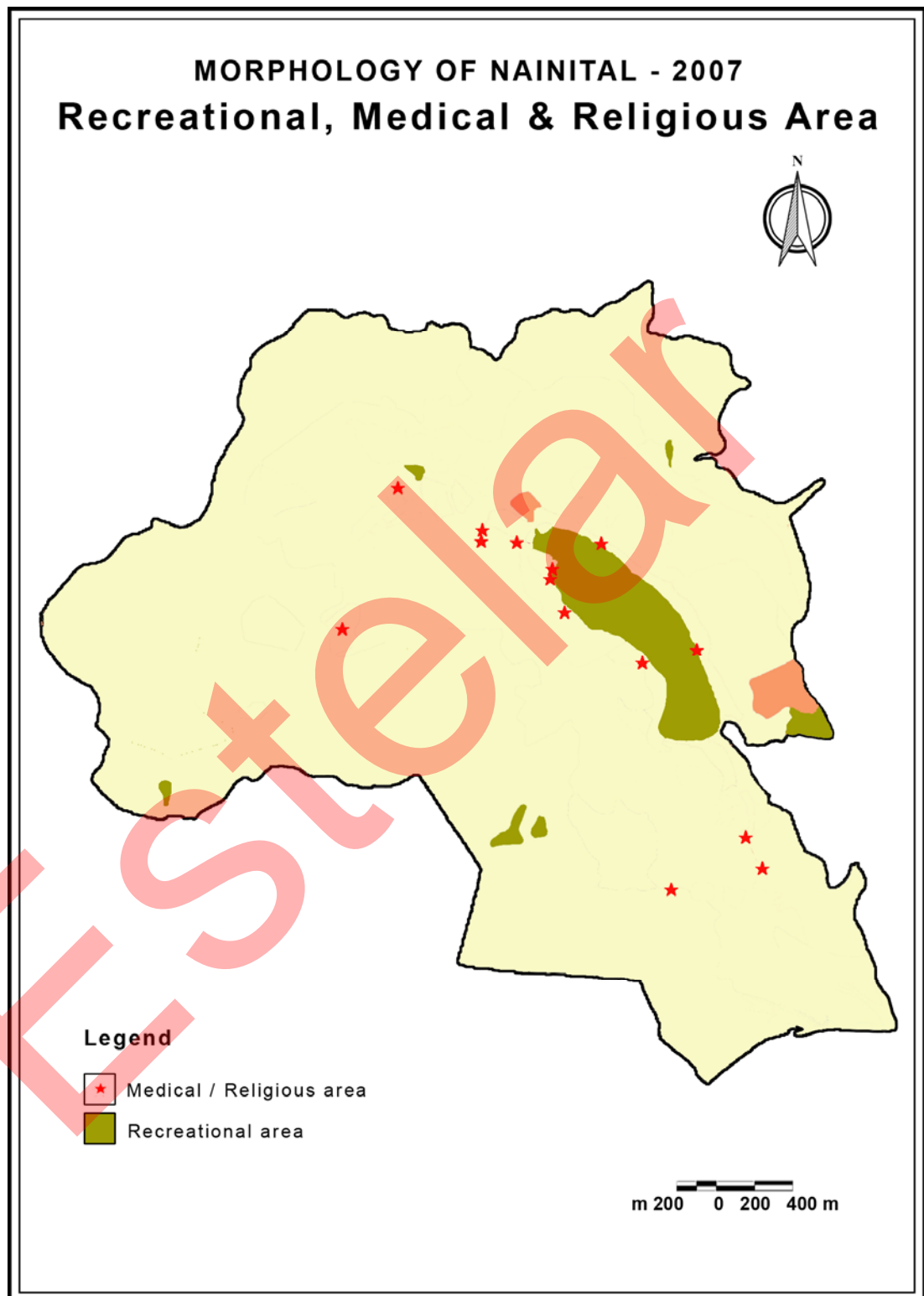
primary and secondary schools in the different parts of the town, depending upon the requirement of the area.

There are two technical institutions in the town, *viz.* the Polytechnic and the I.T.I. College at the Pines. A state level institution known as A.T.I. providing training to the probationers of Provincial Civil Services /I.A.S. and other allied services. This reveals that education is also an important function of the town (Fig. 5.3).

### 5.2.5 Recreational Area

As Nainital has mainly been a tourist resort, it has some advanced recreational facilities like ultra modern clubs, bars and hotels etc. There are two Cinema Halls, clubs (Boat House Club, Gymkhana and D.S.A., Nainital Mountaineering Club, New Club, Rotary Club, Lion Club, Sharada Sangh, etc.), a sports stadium and three parks. Besides yachting and boating in the lake, there are facilities of horse riding and roller skating. Hiking to the surrounding ridges is another form of popular recreation for tourists. They usually go to places which have some modern amenities and provide a certain amount of enjoyment. Some may go for hiking and mountaineering, while others may seek relaxation and enjoy scenic beauty. Nainital holds a great charm of tourists.

The hotel industry thrives on the tourists. Nainital has a chain of hotels and boarding houses. The increasing number of tourists has resulted in the opening of these hotels in Nainital. Most of these hotels are located along the Pant Marg, popularly called the Mall Road, and are easily accessible (Fig. 5.4).

**Fig. 5.4**

### 5.2.6 Medical Areas

Medical and health services constitute a very significant aspect of community services for the popular tourist centre. At present, there

are two government hospitals and an eye hospital, viz., Badri Dutt Pandey Govt. Hospital, G.B. Pant Hospital and Sitapur Eye Hospital. Besides these hospitals some other private clinics and nursing homes are also located in different parts of the town (Fig. 5.4).

### 5.2.7 Religious Areas

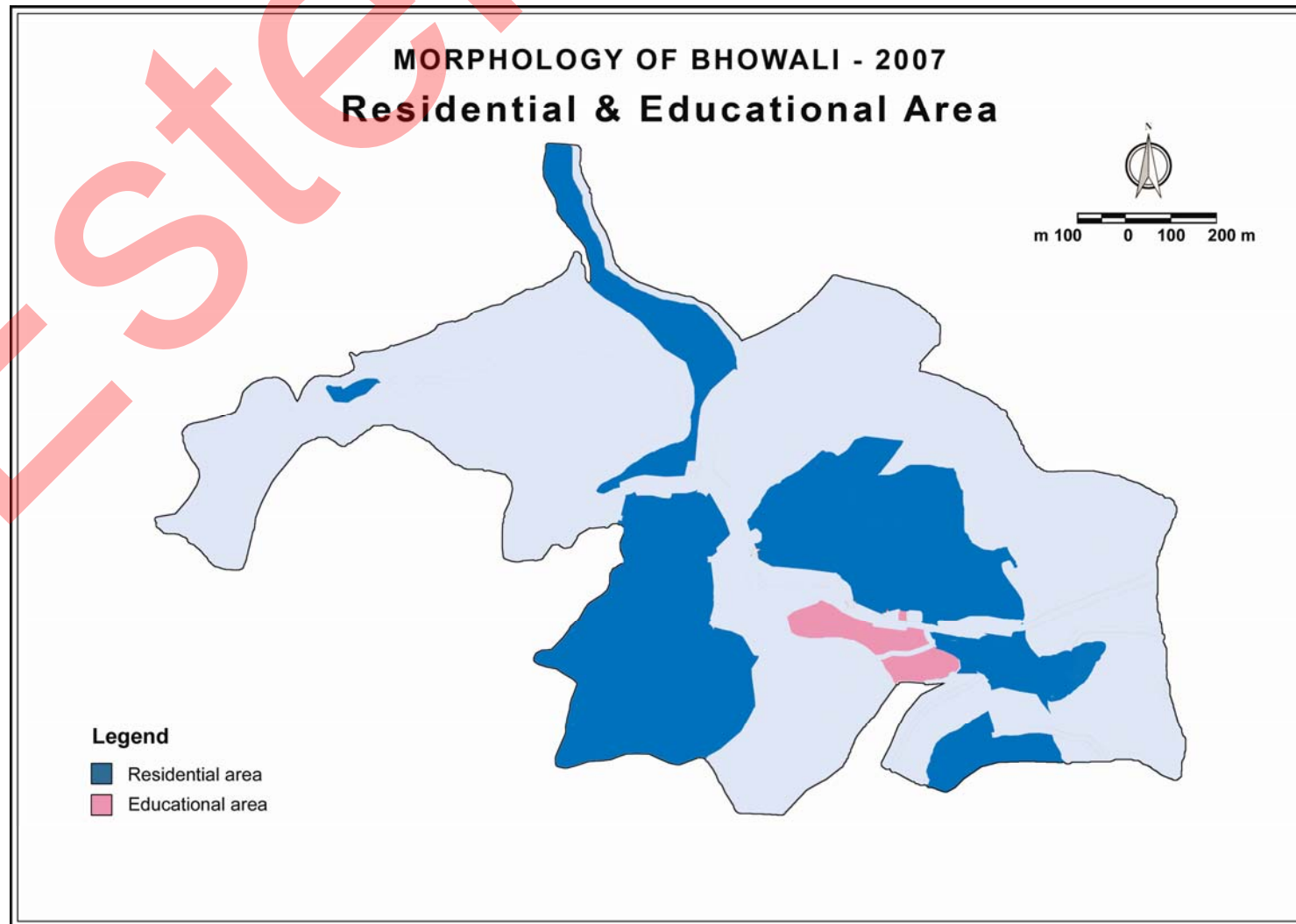
Though there are a few other religious centres as well, but the area around the lake is self contained is as much as it has a temple Naina Devi Temple, Pashan Devi, Golu Devta temple and many more. One Gurudwara, five churches (Church of St. Mary, Methodist Church, St. Francis Church, St. John's Church, and Union Church) and one mosque (Jama Masjid) are located in different part of this tourist town (Fig. 5.4).

## 5.3 Morphology of Bhowali

Bhowali is a fast growing sub-town and is a transport junction as well as a big collecting and distributing centre for an adjoining fruit belt. Market areas have developed around Bhowali and trade and transport is also developing fast. The entire town is now fast growing with various kinds of activities. The development of functions of the town is along the transport junction. The peculiarity of Bhowali and its morphological complex is that the town has neither any distinct and specific developed land use pattern, nor the area has any major morphological zone.

### 5.3.1 Residential and Educational Area

The highly congested residential area of the Bhowali town is the central area, which has developed along the roads that radiate in different directions and tends to be very dense in certain areas due to growth of population. Such settlement is mainly used for commercial purpose, the ground floor being used as a shop and upper floors as residential accommodation invariably in all cases. Besides this linear



**Fig. 5.5**

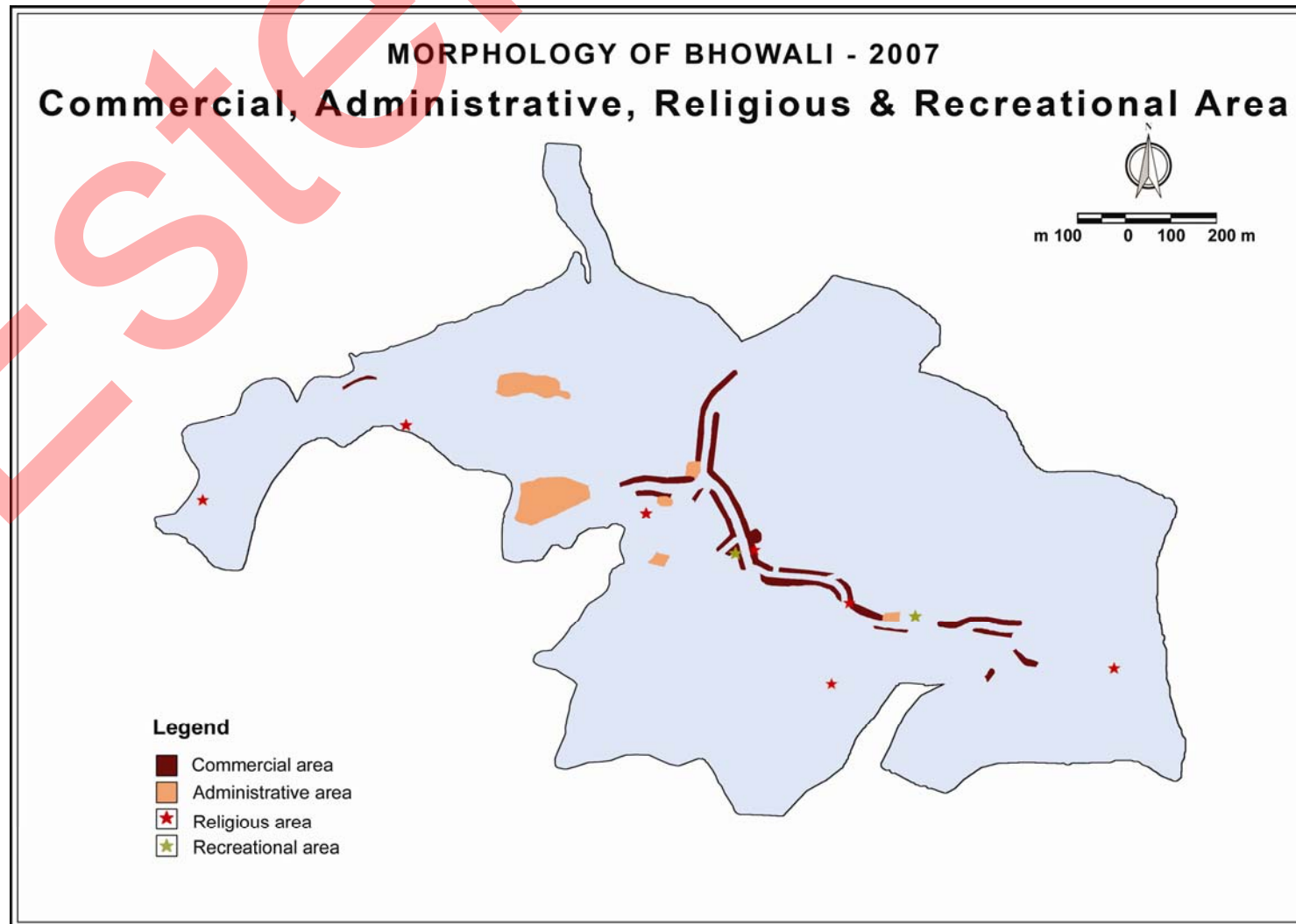
cluster of houses along the roads, Bhowali also shows distribution of settlement along the upper elevations due to its rapid growth of population, advantages of site, increased commercial and related functions, lack of space in Nainital town and an ever increasing circulation in transport routes.

Beside these residential areas, the spacious and most comfortable multi-storeyed structures may also be found in outer parts of the town mainly in Bhowali-Bhimtal road and Bhowali-Ramgarh road. The pattern does not reveal clustering but sometimes there is a trend towards a linear growth along or in alignment with a road nearby. The growth of these residential areas is very recent and has been very rapid also (Fig. 5.5).

### **5.3.2 Commercial, Administrative, Religious and Recreational Area**

In the town the commercial activities are mostly developed in a linear pattern along the roads. Besides, a new business area has developed along with the Bhowali-Bhimtal road rapidly. The main hub of business zone is marked at the junction of roads leading to Bhowali-Nainital, Bhowali-Almora, Bhowali-Bhimtal, Bhowali-Ghorakhal and Bhowali-Ramgarh. The zone has the availability of transport, food grains, clothes, fruits, vegetable etc. A number of shops of stationery, tea stalls, medicines, sweets, grocery and other shops are located in this zone. This zone is flourishing due to growing commercial activities, and tourists visiting Nainital and its surrounding lakes.

Other functions like education, administration, transport and religious are scattered all over the town. This town has two intermediate colleges, one junior high school, a primary school and many Montessori schools. Government Girls Inter College, G.B. Pant School, De Vito School and St. Andrews are located along the Bhowali-Bhimtal road.

**Fig. 5.6**

A few offices, namely, Forest Office, Municipal Board Office, Electricity Office, P.W.D. Office, Water Supply Office, Post Office and Police Station, etc. are also situated in the town. There is a roadways station located in the centre of the town along the Bhowali–Almora road.

There is only one ground which is used for many recreational activities located near G.G.I.C. School along the Bhowali–Bhimtal road. At present there is a hospital, a veterinary hospital, a temple, a church and a mosque in different parts of the town (Fig. 5.6).

## 5.4 Morphology of Bhimtal

Bhimtal is a satellite town of Nainital, which has also developed on the pattern of Nainital along the hill slopes of a lake valley. In Bhimtal small industrial units of the region have been established.

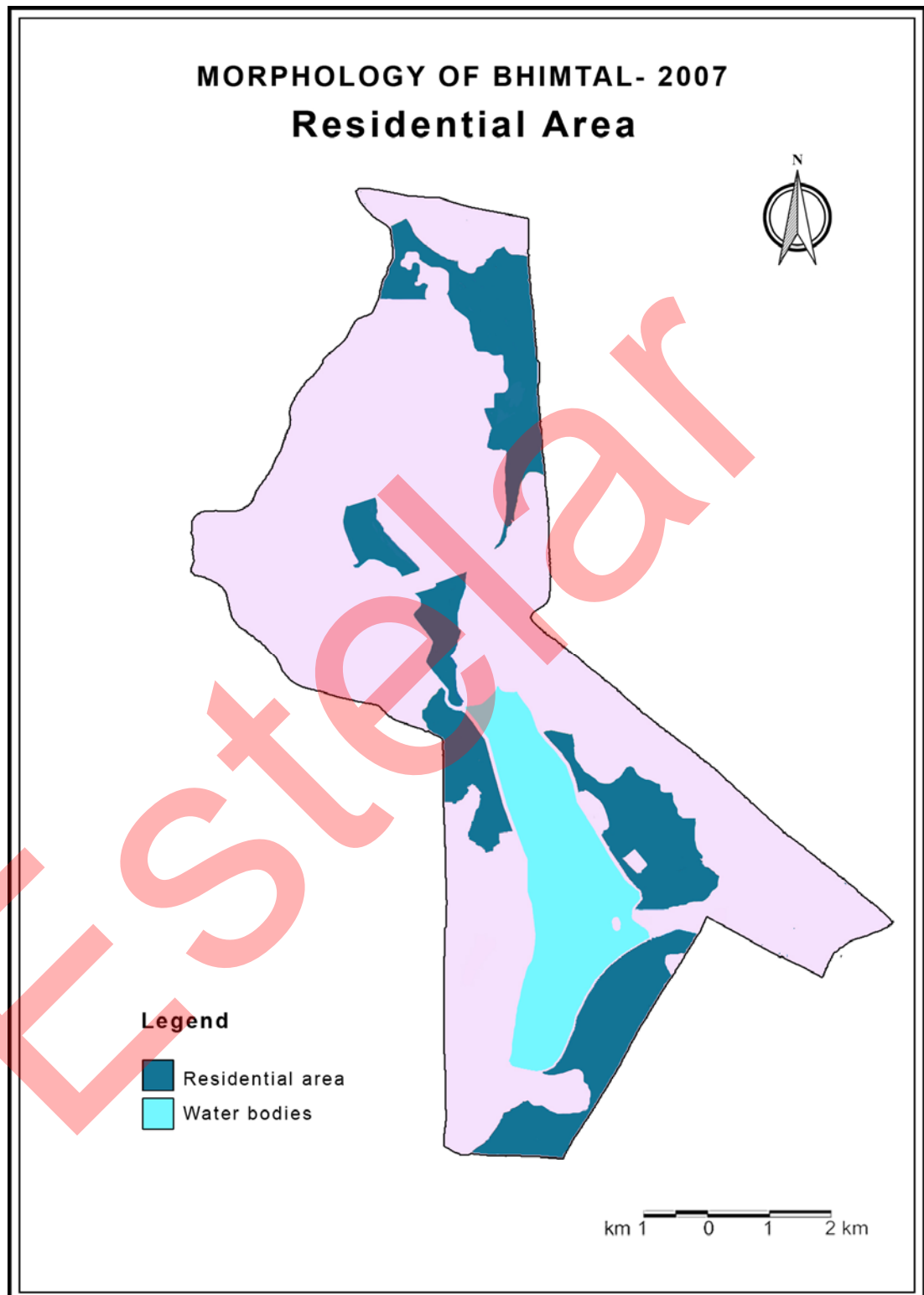
### 5.4.1 Residential Area

The residential area of the town is not dissimilar to Nainital having developed along the lake side and the slopes facing the lake. But in density, function and assemblage, it differs in many ways.

High density residential clusters are missing in Bhimtal and occur only at few places and that too in lesser intensity and to a small extent only. Mallital market area near bus stop and the industrial estate are the main residential areas of the town. Some patches of residential area are also found near the Government Normal School on the Kathgodam road, along the three main road links: Bhimtal-Bhowali, Bhimtal-Kathgodam and Bhimtal-Naukuchiatal (Fig. 5.7).

On moving east, west, north-west, north-east, north and south of the lake, the residence area trends to get scattered, partly on account of increased elevations and increased distance from the focus and also because of a change in the land use.

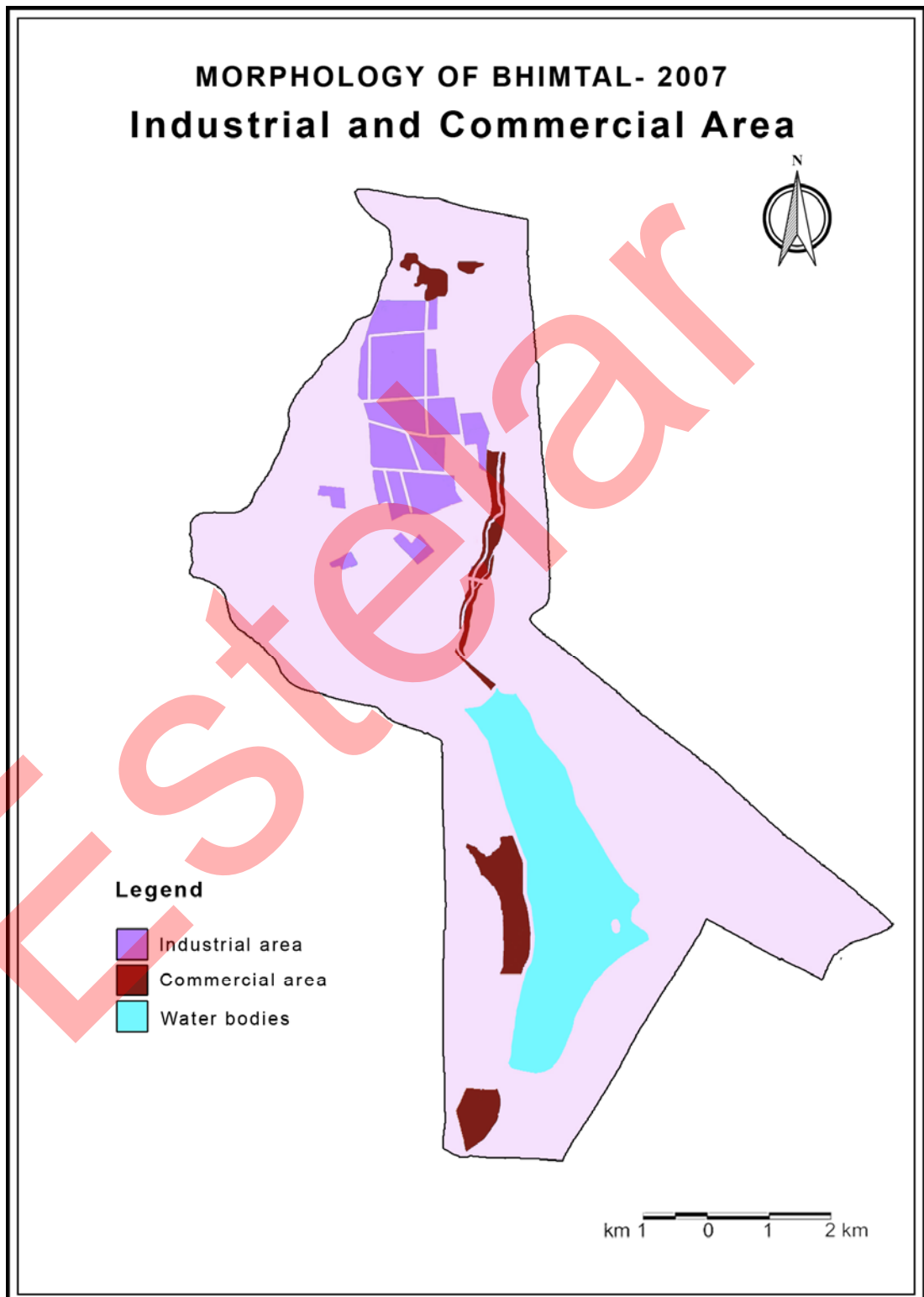


**Fig. 5.7**

#### **5.4.2 Industrial Area**

Bhimtal is the main industrial area of the region. Of late, industrial activity has become very important in the town due to practices of the government. Many industries were established but in

due course, due to various reasons the pace of industrial growth has slowed down.



**Fig. 5.8**

At present the industrial growth has been developed along the “Anu ka maidan” near Mallital market. Aquamall Water Solution,

Jindal Photo Films, Silk production industry etc. are located in this area (Fig. 5.8).

### 5.4.3 Commercial Area

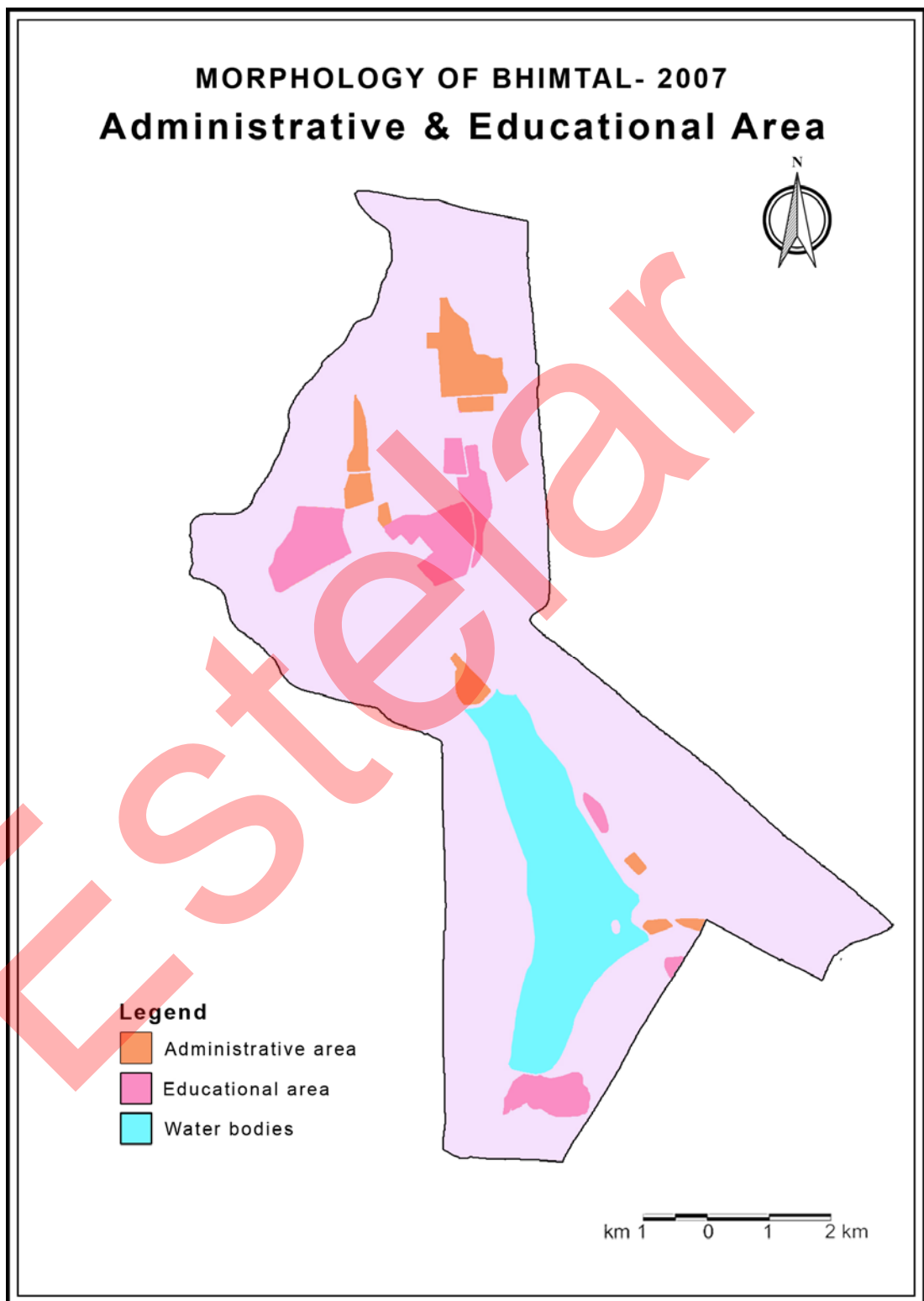
Commercial areas are found firstly at upper end of the lake while approaching from Bhowali, near a cluster of population in and around the industrial area. The second market area is found near the bus station, which mainly caters to the needs of the visiting tourists and a small population living close by. Yet another cluster of local population is found at the lower end of the lake known as Tallital, where a small market has also developed mainly due to the new road link between Bhimtal and Kathgodam that passes through this market (Fig. 5.8).

### 5.4.4 Administrative Areas

Administrative area is located near industrial area and along the Bhowali-Bhimtal road. As per Government policy, there is now a total restriction on locating any new offices in Nainital whether of state or Central Government, and these are to be located at Bhimtal. The Fisheries Department, Vikas Bhawan and the office of Basic Shiksha Adhikari are located near industrial estate. Block Office and Telephone Exchange are located near Mallital market and a small patch of administrative area is also found near Bhimeshwar temple. Irrigation office, Nagar Panchayat offices are located in this area (Fig. 5.9).

### 5.4.5 Educational Area

The educational areas of the town are located near Ramleela Ground, the upper side of the lake and the Tallital the lower side of the lake. In upper part of the lake, M.B.A., M.C.A. and B.Pharm. units of Kumaon University, Birla Institute of Applied Sciences and Lake International School are located. The D.I.E.T. and Hermann Gmeiner School are located the southern part of the lake.

**Fig. 5.9**

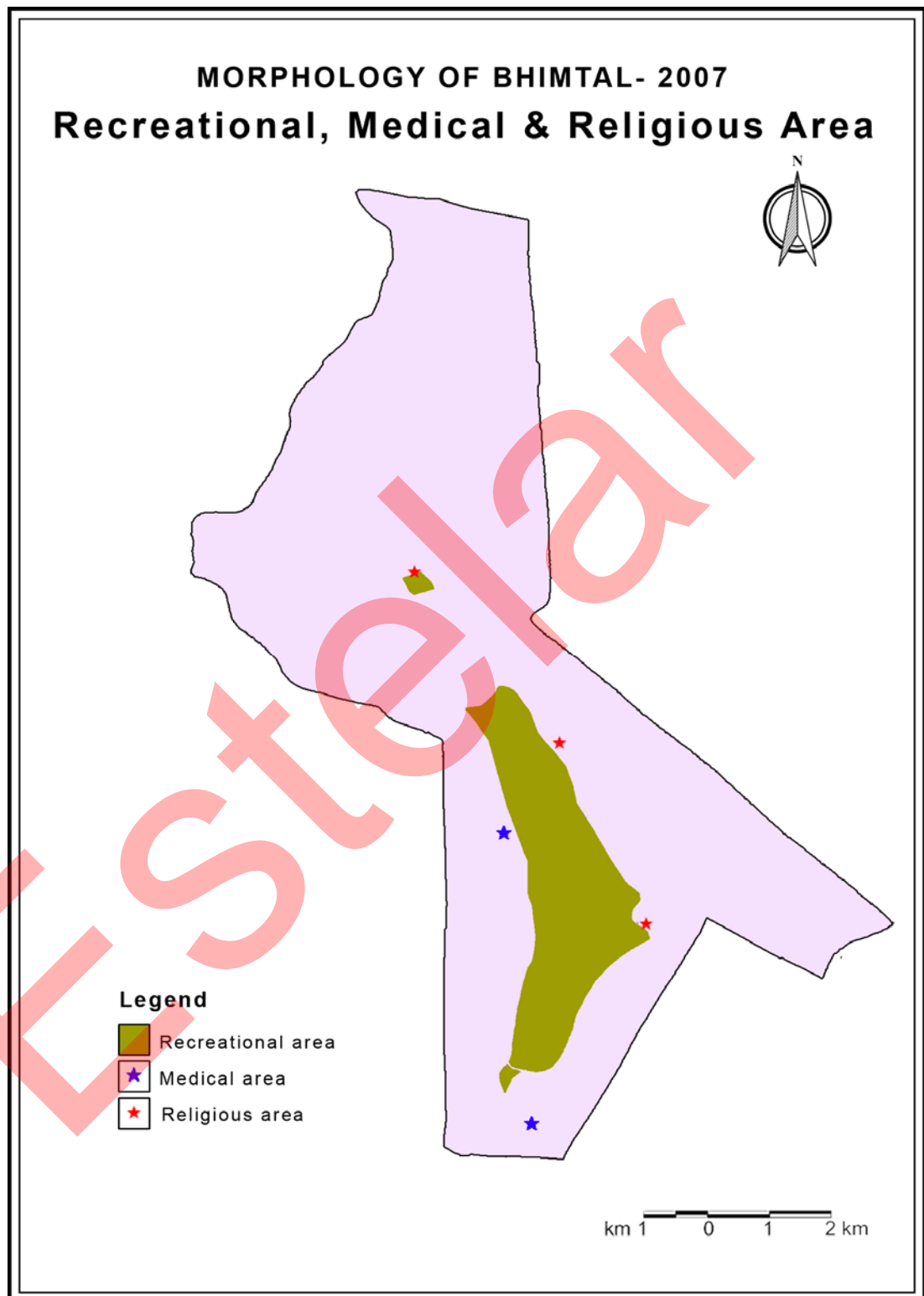
Besides these schools and institutes, many schools are located in different parts of the town. The Government Inter College is located

near bus station and the primary and Government Girls Inter College located near Bhimeswar temple (Fig. 5.9).

#### **5.4.6 Recreational, Medical and Religious Area**

Besides these functional areas of the town other services are scattered throughout the town. There are two play grounds for recreational purpose, one is the Ramleela ground located in Mallital market and the other is located near Tallital market. The main recreation centre of the town is the lake and the island in the lake.

There is a Ladies Hospital located near Tallital market, a Primary Health Centre and a Veterinary Hospital located in different parts of the town (Fig. 5.10).

**Fig. 5.10**

## 5.5 Factors Influencing the Morphological Development

The concept of process, structure and stages in the morphology of towns almost conveys similar meaning of the histogenesis pattern formation and morphogenesis. The morphological development of the towns is influenced by many physical and cultural factors like location, site, climate, natural beauty, transport and communication, trade and commerce, education, industries, administration etc.

### 5.5.1 Physical Factors

#### 5.5.1.1 Location and Site Control

The towns are located in the southern part of the state. The location and nearness to plains have influenced the functions of the town. Nainital and Bhimtal towns grew and expanded around a lake and Bhowali sited on a spur.

#### 5.5.1.2 Climate Control

Climate plays an important influencing role in the origin, growth and in determining the morphological patterns of the town in the lake region. Because of cool and healthy climate and serene environment these towns were developed by the Britishers. At present the towns have also established as a health resort and tourist centres.

- i. **Natural Beauty:** It is the scenic beauty of the places and their commanding view which has attracted people and led to the growth of some towns. Such towns grew and developed surrounding hills around the lakes.

People selected sites for their houses in such places which had beautiful and scenic views in their vicinity. The scenic beauty plays an important role in selection of a site for tourist centre, hotels, residences of officers and the affluent people. Nainital and Bhimtal have had considerable growth due to their beautiful surroundings.



- ii. **The Availability of Water:** In the beginning, the towns grew close to some source of water, such as springs, rivulets, streams and rivers. The main sources of the water in these towns are their central lakes. Water schemes were introduced in the post-independence period in these towns.

### 5.5.2 Cultural Factors

The cultural factors are the resultants of human efforts put into geographical environment, and they have also played very significant role in determining the morphology of urban settlement of the region. The detailed study of their influences is revealed as follows:

#### 5.5.2.1 Impact of Transport and Communication

The important factor which determines the morphology of towns is the transportation network, which is the backbone for the development of towns. In the beginning, they used to be the main attractive force of the resorts. As they give incentive to increasing and speedier mobility, they play an important role in developing and shaping the morphology of the towns, particularly in the hilly regions, where accessibility is the main factor for the development of any type of settlement.

Even the character of houses varies away from roads within a town. The road side houses are generally double or triple storied and perform commercial and recreational functions. Roads and lanes form the skeleton of a settlement. The improved roads have helped in the growth of the towns. Good roads also add to its beauty and attraction. The great attraction in Nainital and Bhimtal is the Mall Road.

Business areas and industries have also developed in the towns on the main roads. The peripheral development, due to centrifugal forces, took place in the areas linked by roads. This type of morphological pattern found in Bhowali town.

### 5.5.2.2 Functional Impact

In Lake Region the towns are small and perform almost all the urban functions but on a very small scale.

The towns have been performing various functions through their respective functional zones viz., residential, commercial, industrial, administrative, educational, recreational, religious, medical, and transport areas. The towns of the lake region grew and developed in the British period, when the British started settling in the hills of the region. The trend of open, spacious and bungalow type residential houses with proper places for towns etc and parks and open grounds in the towns brought a change in their morphology. The modern educational system was also introduced in British period. They propagated the idea of better education and improved ways of living with changed standards of values and established many English medium schools. Nainital, since the very beginning has been the important administrative centre. Bhowali is famous for its T.B. sanatorium.

The new phase of development is characterized with the growth of additional functions in the towns and resulted in the growth and extension of these towns. Because of cool and healthy, climate and peaceful environment, the towns developed as a tourist resort and educational centres. Nainital is visited every year by about 1,00,000 tourists. It has a High Court, a Government House, a University, A.T.I. and head offices of some of the departments. It has many hotels, inns and restaurants. It is the only town in the region with 2 cinema halls and golf course. Bhowali is a big transport centre of the region and Kumaun, and is linked to hills with foothill area. Bhowali is also famous for its vegetable and fruit market. Bhimtal, at present, is famous for its institutional, administrative, industrial and recreational functions.

- i. **Impact of Educational Institution on the Morphology:** In the modern period the lake region towns are equipped with big educational institutions of higher learning and famous English

medium and public schools. Some of these have nationwide fame. The public schools are run in very congenial atmosphere with sufficient space and good hostels, in open areas with peaceful atmosphere, away from the congested residential and business areas. Sherwood College, Birla Vidya Mandir, St. Joseph's College, St. Mary's Convent and All Saints' College are the main schools of the region. Beside these, the training and technological institutes have also been added to the town-morphology. These training institutions have hostels and facilities for games. The polytechnic, A.T.I., I.T.I. in Nainital and the M.B.A., M.C.A. and B.Pharm. in Bhimtal University complex are located at Bhimtal. Though these institutions are handicapped by limited area at their commands, they have helped in the growth and expansion of the towns on modern lines.

- ii. **Impact of trading and commercial establishment:** Bhowali is growing fast because of the growth of trade and commerce. Business centres have developed in the central parts of Bhowali along the main roads. In Nainital the business areas have become over-crowded.
- iii. **The impact of industries:** Bhimtal town has mostly medium and small scale industries. The industries are mainly located in between the commercial and administrative centres. Some small scale industries like candle, Forbes Aquamall Limited, Regional Tasar Research Station, Jindal Photo Films etc.
- iv. The lake region is located in the heart of the Nainital District of the Kumaun region of the Uttarakhand State, therefore, tourism developed as the main industry in the region. The towns have been tourist resorts, they have advanced recreational facilities. Because of its picturesque surrounding many places holds a great charm for tourists. The industries add to the growth of trade and commerce, while job opportunities and income

prospects attract large number of people who consequently also require new residences.

- v. **Impact of administrative functions:** Nainital town grew to perform administrative functions because it was the summer capital of U.P. Government and also the headquarters to different government offices. At present in Nainital the High Court, Collectorate, P.W.D. office etc. are functioning, in Bhimtal, Vikas Bhawan, Block office and Fisheries Department etc. are functioning while in Bhowali, Forest Office are the main administrative units located. Thus, the establishment of these units has also added to the growth and expansion of towns.
- vi. **Impact of the policy of the government:** The governmental development activities during the post-Independence period injected new inspiration to the resort towns, and planned development took place in them. Thus, the towns have better future prospects of growth as well.
- vii. **The impact of town forming forces:** Two forces, centripetal and centrifugal are the most important factors for the formation and development of town morphology. For the origin of the towns in Lake Region, some nuclei have worked as the centripetal forces, particularly shrines and scenic spots like lake view, snow view etc. They have attracted and concentrated the population and various establishments. Colby (1959) has termed the centripetal forces as functional magnetism and functional prestige.

## 5.6 Prospects and Problems

The growth of towns is affected by centripetal forces and forms commonly the concentric growth pattern. At this stage, the centrifugal force ensues and establishments occur towards the peripheral zones. The congestion and suffocation in the heart of the towns have caused the search of open space, which is termed as spatial force. When the oppressed class tends to move outward, due to increased land value

and high taxes, it is termed as 'the force of social evolution' (Colby, 1933).

Nainital and its surrounding towns attracts tourist during the summer season. Because of this, population of towns is growing very rapidly and the related problems are also growing very rapidly. For want of basic facilities (water, electricity, residence, etc.) a growth is being noticed in the problems of the towns. Even then people are migrating to the cities in search of employment and other facilities. Consequently, unauthorized encroachments and illegal constructions are going on public land. These encroachments and illegal constructions are being made not only by poor class but also by rich and prosperous class due to which the problems of towns are growing rapidly. In these towns the central part of the town narrow crowded residential area is present adjacent to the commercial area, narrow lanes, and rickety houses with two-three storeys. The process of migration for providing residential facilities to the growing population dense and illegal residential areas in various parts of the town has come up. The construction of residential areas has been rapid in the encroached areas of the town. In these towns Commercial area is also centralized. There is also sufficient evidence to show migration of functions from one town to the other town. In these towns each activity appears to seek a site at which it may flourish best and the people of the community appear to determine how they wish the land to be used. For planned development of the towns now, Nainital Lake Region Special Area Development Authority (NLRSDA) in Nainital, prepared a master plans for the Nainital and Bhimtal town and control is being exercised over the past practice of haphazard growth.

